

What is claimed is:

- Rule 1.126*
- 1 ²⁶ 1. An electric machine with a multi- pole rotor comprising:
2
3 - ferromagnetic poles separated from each other by radially oriented slots, wherein the
4 width of said slots changes stepwise in tangential direction; and
5
6 - a plurality of permanent magnets per pole, wherein said magnets are placed into said
7 radial slots between adjacent poles in such a manner that the total width of magnets in a
8 given radial slot varies from the bottom to the top of the slot.
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- 1 ²⁷ 2. A rotor, as set forth in claim ²⁶ 1, wherein said permanent magnets have rectangular shapes.
2
3 ²⁸ 3. A rotor, as set forth in claim ²⁶ 1, wherein said permanent magnets are predominantly
4 tangentially magnetized.
5
6
- 1 ²⁹ 4. An electric machine with a multi- pole rotor comprising:
2
3 - ferromagnetic poles separated from each other by radially oriented slots, wherein
4 said slots are trapezoidally shaped; and
5
6 - a plurality of trapezoidally shaped permanent magnet in each said slot.
7
- 1 ³⁰ 5. An electric machine with a multi- pole rotor comprising:
2
3 - ferromagnetic poles separated from each other by radially oriented slots, wherein
4 said slots are trapezoidally shaped,
5
6 - a plurality of trapezoidally shaped permanent magnets in each said slot, and
7
8 - a plurality of non- magnetic wedges per each said rotor pole.
9
- 1 ³¹ 6. A synchronous machine with a rotor comprising:
2
3 - a plurality of iron core segments per pole;
4
5 - a plurality of permanent magnets per pole;
6
7 - an optional squirrel cage; and
8

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comes

9 - a stator with two or more separate windings, or a winding capable to generate more
10 than one polarity of the air gap field, such as Dahlander pole- changing winding, a pole-
11 amplitude modulated winding, a pole- phase modulated winding etc.
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7 A rotor, as set forth in claim 6, wherein said permanent magnets have rectangular shapes.
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8 A rotor, as set forth in claim 6, wherein said permanent magnets have trapezoidal shapes.
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9. An electric machine with a multi pole rotor comprising:

- 2
3 - a plurality of tangentially magnetized permanent magnets;
4
5 - a plurality of radially magnetized permanent magnets, and
6
7 - a plurality of coils.